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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,566	04/19/2004	Virinder Mohan Batra	CHA920040004US1	3188

23550 7590 04/20/2007

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EXAMINER	
GORTAYO, DANGELINO N	
ART UNIT	**PAPER NUMBER**
2168	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

ED

Office Action Summary	Application No.	Applicant(s)	
	10/827,566	BATRA ET AL.	
	Examiner	Art Unit	
	Dangelino N. Gortayo	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In the amendment filed on 1/22/07, claims 1, 8, and 16 have been amended. The currently pending claims considered below are Claims 1-20.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Gardner (US Publication 2003/0177143 A1)

As per claim 1, Gardner teaches "A system for dynamically implementing a chain of Web services from a client on the World Wide Web to execute a workflow," (see Abstract)

"comprising: a database for storing a list of available Web services, wherein each listed Web service includes a description of a task performed by the Web service, and an input signature and an output signature of the Web service;" (Figure 2 reference 210, Figure 4 reference 420, paragraphs 0049, 0062, 0064, 0065, wherein a data warehouse

stores bioinformatics data to process data, with a data parser transforms content of disparate data for identification and use, data identified by data types to be retrieved and analyzed)

"and a selecting system for forming the chain of Web services by selecting a Web service for each of a plurality of tasks in the workflow," (Figure 12, paragraphs 0051, 0052, and 0098, wherein workflow and automation tools organize a drug discovery process using various modules and tools) "wherein the selecting system dynamically matches the input signature of a first Web service with the output signature of the adjacent Web service to ensure that each selected Web service is compatible with the adjacent Web service in the chain of Web services." (Figure 12 and paragraphs 0049, 0064, 0065, 0078, 0081, 0098, 0105, 0106, wherein the bioinformatics system matches the data types that can be entered into various modules and processes, and work cooperatively, in a chain, to come up with a result for a query)

As per claim 2, Gardner teaches "the workflow comprises a microarray analysis workflow." (paragraph 0046, wherein the system analyzes and clusters bioinformatics data)

As per claim 3, Gardner teaches "a workflow generator for creating the workflow." (Figure 2 reference 250, paragraph 0098, wherein workflow tools organizes the tasks into a workflow to process data)

As per claim 4, Gardner teaches "the list of available Web services resides locally with the client." (paragraph 077, 0096, wherein the user is presented with icons showing different tasks present in other data sources)

As per claim 5, Gardner teaches "a system for collecting and storing available Web services data." (Figure 11, paragraph 0094, 0095)

As per claim 6, Gardner teaches "a system for inputting sequence data into the workflow execution." (Figure 11, paragraph 0051, 0100, wherein target identification and target validation module inputs data)

As per claim 7, Gardner teaches "the workflow includes a specified input and output format." (paragraph 0049, paragraph 0086, 0087, wherein a user specifies the input and output format)

As per claim 8, Gardner teaches "A program product, stored on a recordable medium for executing a workflow by dynamically implementing Web services from a client on the World Wide Web," (see Abstract)

"comprising: means for storing a list of available Web services, wherein each listed Web service includes a description of a task performed by the Web service, and an input signature and an output signature of the Web service;" (Figure 2 reference 210, Figure 4 reference 420, paragraphs 0049, 0062, 0064, 0065, wherein a data warehouse stores bioinformatics data to process data, with a data parser transforms content of disparate data for identification and use, data identified by data types to be retrieved and analyzed)

"and means for forming a chain of Web services by selecting a Web service for each of a plurality of tasks in the workflow," (Figure 12, paragraphs 0051, 0052, and 0098, wherein workflow and automation tools organize a drug discovery process using

various modules and tools) "wherein the forming means matches input signature of a first Web service and the output signature of an adjacent Web service to ensure that each selected Web service is compatible with the adjacent Web service in the chain of Web services." (Figure 12 and paragraphs 0049, 0064, 0065, 0078, 0081, 0098, 0105, 0106, wherein the bioinformatics system matches the data types that can be entered into various modules and processes, and work cooperatively, in a chain, to come up with a result for a query)

As per claim 9, Gardner teaches "the workflow comprises a microarray analysis workflow." (paragraph 0046, wherein the system analyzes and clusters bioinformatics data)

As per claim 10, Gardner teaches "the workflow comprises a bioinformatics workflow." (paragraph 0046, 004, "bioinformatics system")

As per claim 11, Gardner teaches "means for creating the workflow." (Figure 2 reference 250, paragraph 0098, wherein workflow tools organizes the tasks into a workflow to process data)

As per claim 12, Gardner teaches "the storage means resides locally with the client." (paragraph 077, 0096, wherein the user is presented with icons showing different tasks present in other data sources)

As per claim 13, Gardner teaches "means for collecting and storing available Web services data in said storage means." (Figure 11, paragraph 0094, 0095)

As per claim 14, Gardner teaches "a system for inputting sequence data into the workflow execution." (Figure 11, paragraph 0051, 0100, wherein target identification and target validation module inputs data)

As per claim 15, Gardner teaches "the workflow includes a specified input and output format." (paragraph 0049, paragraph 0086, 0087, wherein a user specifies the input and output format)

As per claim 16, Gardner teaches "A method for executing a bioinformatics workflow from a client on the World Wide Web," (see Abstract)

"comprising: providing a workflow having a plurality of tasks;" (Figure 12, paragraph 0049, 0052, 0098, wherein a workflow with a variety of tasks is made by workflow and automation tools)

"providing a list of known bioinformatics Web services, wherein each listed Web service includes a description of a task performed by the Web service, and an input signature and an output signature of the Web service;" (Figure 2 reference 210, Figure 4 reference 420, paragraphs 0049, 0062, 0064, 0065, wherein a data warehouse stores bioinformatics data to process data, with a data parser transforms content of disparate data for identification and use, data identified by data types to be retrieved and analyzed)

"selecting a Web service from the list of known bioinformatics Web services for each task in the bioinformatics workflow to form a chain of Web services, wherein the selecting step dynamically matches the input signature of a first Web service with the

output signature of an adjacent Web service to ensure that each selected Web service is compatible with the adjacent Web service in the chain of Web services(Figure 12 and paragraphs 0049, 0064, 0065, 0078, 0081, 0098, 0105, 0106, wherein the bioinformatics system matches the data types that can be entered into various modules and processes, and work cooperatively, in a chain, to come up with a result for a query)

"and calling each selected Web service in the chain to execute the bioinformatics workflow." (paragraph 0098, wherein the processes of the workflow are executed)

As per claim 17, Gardner teaches "the bioinformatics workflow comprises a microarray analysis." (paragraph 0046, wherein the system analyzes and clusters bioinformatics data)

As per claim 18, Gardner teaches "the list of known bioinformatics Web services resides locally to the client." (paragraph 077, 0096, wherein the user is presented with icons showing different tasks present in other data sources)

As per claim 19, Gardner teaches "the workflow includes a specified input and output format." (paragraph 0049, paragraph 0086, 0087, wherein a user specifies the input and output format)

As per claim 20, Gardner teaches "the step of calling each selected Web service includes the step of providing a set bioinformatics data to a first Web service in the chain in the specified input format." (paragraphs 0078, 0079, 0080, 0081)

Response to Arguments

4. Applicant's amendments, see page 7, filed 1/22/2007, with respect to the rejection of claims 1-15 under 35 USC 101 have been fully considered and are persuasive. The rejection of claims 1-15 in regards to 35 USC 101 has been withdrawn.

5. Applicant's arguments, see page 8, filed 1/22/2007, with respect to the rejection of claims 1-20 under 35 USC 102(e) have been fully considered but they are not persuasive. Details are stated below.

a. Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 2111 [R-I]

Interpretation of Claims-Broadest Reasonable Interpretation

During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecussion and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

b. Applicant's argument is stated as Gardner does not teach dynamic matching of input signatures and output signatures of adjacent Web services in order to aid in forming a chain of Web services.

In regards to the argument, examiner respectfully disagrees. As to the argument that Gardner does not teach matching of input signatures and output signatures of adjacent Web services, Applicant is directed towards paragraphs

0064 and 0082, wherein different data types from a variety of data sources are identified and can be correlated when using different modules and processes. The various data types can be used as an identifier for data to be processed into the system from various different data sources, and can be used in helping identify the query input, as shown in paragraphs 0064 and 0065, or by helping identify the result output format, as taught in Figure 4 reference 420 and paragraphs 0071 and 0072.

In paragraphs 0098, 0105, and 0106, it is shown how program modules, each with a different task or service, are linked together in a drug discovery process, with each module inputting the output of the previously linked module. While the modules handle different types of data, they are linked together for a drug discovery process despite the different data types. In paragraphs 0077, Gardner teaches how an iterative set of queries is accomplished, wherein data sources identified by name and type are used for data and comparison, to arrive at results for the queries. Paragraph 0063 teaches that various data sources with different data types are used in the process, and can be integrated into the system of Gardner to form a drug discovery process composed of various linked modules. Therefore, Gardner does teach dynamic matching of input signatures and output signatures of adjacent Web services in order to aid in forming a chain of Web services.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dangelino N. Gortayo whose telephone number is (571)272-7204. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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